

PATENT
Docket No.: CX03009USU(00CXT0291D)
09/617,587

TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) A receiver circuit, comprising:
 - a sampler, for taking digital samples of a received signal, said received signal including at least a first portion and a second portion which repeats the content of the first portion after a repeat interval;
 - ~~a processing device, for processing the digital samples on the basis of an assumed position of the first and second portions in the received signal;~~
 - a plurality of correlators for measuring:
 - a first correlation between a first group of samples including at least samples around the beginning of the first portion of the signal, and a second group of samples including at least samples around the beginning of the second portion of the signal; and
 - a second correlation between a third group of samples including at least samples around the end of the first portion of the signal, and a fourth group of samples including at least samples around the end of the second portion of the signal;
 - means for comparing the measured first and second correlations to produce a comparison output; and

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means for determining a revised assumed position of the first and second portions on the basis of the comparison output in order to tend to equalize the first and second correlations.

2. (original) A receiver circuit as claimed in claim 1, wherein the first, second, third and fourth group of samples each have the same length as the first and second portions of the signal.

3. (original) A receiver circuit as claimed in claim 2, wherein the first group of samples is offset relative to the first portion of the signal, the second group of samples is offset relative to the second portion of the signal, the third group of samples is offset relative to the first portion of the signal, and the fourth group of samples is offset relative to the second portion of the signal, the durations of said offsets all being equal.

4. (original) A receiver circuit as claimed in claim 3, wherein the durations of said offsets are all equal to two sample periods.

5. (original) A receiver circuit as claimed in claim 1, wherein the first group of samples includes a predetermined number of samples at the beginning of the first portion of the signal, the second group of samples includes a predetermined number of samples at the beginning of the second portion of the signal, the third group of samples includes a predetermined number of samples at the end of the first portion of the signal, and the fourth

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group of samples includes a predetermined number of samples at the end of the second portion of the signal.

7 ~~6~~ (currently amended) A method for receiving signals, the method comprising:

taking digital samples of a received signal, said received signal including at least a first portion and a second portion which repeats the content of the first portion after a repeat interval;

~~processing the digital samples on the basis of an assumed position of the first and second portions in the received signal;~~

measuring a first correlation between a first group of samples including at least samples at the beginning of the first portion of the signal, and a second group of samples including at least samples at the beginning of the second portion of the signal; and

measuring a second correlation between a third group of samples including at least samples at the end of the first portion of the signal, and a fourth group of samples including at least samples at the end of the second portion of the signal;

comparing the measured first and second correlations to produce a comparison output; and

determining a revised assumed position of the first and second portions on the basis of the comparison output in order to tend to equalize the first and second correlations.

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8 ~~7~~. (original) A method as claimed in claim ~~6~~⁷, wherein the first, second, third and fourth group of samples each have the same length as the first and second portions of the signal.

9 ~~8~~. (original) A method as claimed in claim ~~7~~⁸, wherein the first group of samples is offset relative to the first portion of the signal, the second group of samples is offset relative to the second portion of the signal, the third group of samples is offset relative to the first portion of the signal, and the fourth group of samples is offset relative to the second portion of the signal, the durations of said offsets all being equal.

10 ~~9~~. (original) A method as claimed in claim ~~8~~⁹, wherein the durations of said offsets are all equal to two sample periods.

11 ~~10~~. (original) A method as claimed in claim ~~9~~¹⁰, wherein the first group of samples includes a predetermined number of samples at the beginning of the first portion of the signal, the second group of samples includes a predetermined number of samples at the beginning of the second portion of the signal, the third group of samples includes a predetermined number of samples at the end of the first portion of the signal, and the fourth group of samples includes a predetermined number of samples at the end of the second portion of the signal.

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~~11~~. (previously presented) A receiver circuit, for processing a received signal, said received signal including at least a first portion and a second portion that repeats the content of the first portion after a repeat interval, the receiver circuit comprising a plurality of correlators, for calculating an early correlation and a late correlation, the early correlation being measured between samples ahead of an assumed first portion start position and ahead of an assumed second portion start position, and the late correlation being measured between samples behind an assumed first portion end position and behind an assumed second portion end position, and revising the assumed start and end positions of the first and second portions on the basis of a calculated difference between the early correlation and the late correlation.

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~~12~~. (new) A receiver circuit as claimed in claim 1, wherein the received signal is a coded orthogonal frequency division multiplexing ("COFDM") signal.

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~~13~~. (new) A method as claimed in claim ~~6~~, wherein the received signal is a COFDM signal.

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14. (new) A receiver circuit as claimed in claim ~~11~~, wherein the received signal is a COFDM signal.